

## CLAIMS

1. A method of training a device for linearizing a radiofrequency amplifier (31) which is included within a radiofrequency transmitter (30) of a first equipment (5) of a radiocommunication system, which transmitter is adapted for transmitting bursts according to a determined frame structure, each burst comprising symbols belonging to a determined alphabet of symbols, the method comprising the steps consisting in:
- 5 a) generating a linearization training sequence (Figure 3) comprising a determined number N of symbols, where N is a determined integer;
  - 10 b) transmitting the linearization training sequence by means of the transmitter in at least certain of the bursts transmitted by the latter;
  - 15 c) comparing the linearization training sequence transmitted with the linearization training sequence generated so as to teach said linearization device,
- 20 characterized in that, in step b), the linearization training sequence is included in a sequence of symbols that is further designed to allow the adjusting of parameters of the transmission chain between said first equipment and a second equipment (5') of the radiocommunication system with which said first
- 25 equipment communicates.
2. The method as claimed in claim 1, wherein the sequence of symbols that is designed to allow the adjusting of parameters is a sequence of symbols that
- 30 is designed to allow the dynamic control of the gain of a variable-gain amplifier of a radiofrequency receiver of a second equipment of the radiocommunication system with which the first equipment communicates.

3. The method as claimed in claim 1 or claim 2, wherein the linearization training sequence occupies only a part of the burst in which it is transmitted.

5 4. The method as claimed in claim 3, wherein the linearization training sequence occupies around 5% of the duration of the burst in which it is transmitted.

10 5. The method as claimed in any one of the preceding claims, wherein the linearization training sequence is transmitted at the start of the frame.

15 6. The method as claimed in any one of the preceding claims, wherein the linearization training sequence is further transmitted during a change of logical channel, a change of frequency and/or a change of power rating of the first equipment.

20 7. The method as claimed in any one of the preceding claims, wherein the sequence of symbols that is designed to allow the dynamic control of the transmission power of the mobile terminal comprises more than N symbols, and according to which said N symbols of the linearization training sequence are the  
25 symbols of the sequence of symbols that is designed to allow the dynamic control of the transmission power of the mobile terminal which are sent first.

30 8. A device for training a device (33) for linearizing a radiofrequency amplifier (31) which is included within a radiofrequency transmitter (30) of a first equipment of a radiocommunication system, which transmitter is adapted for transmitting bursts according to a determined frame structure, each burst  
35 comprising symbols belonging to a determined alphabet of symbols, the device comprising:

a) means (300, 10, 20) for generating a linearization training sequence comprising a determined number N of symbols, where N is a determined integer;

- b) means (300, 30) for transmitting the linearization training sequence by means of the transmitter in at least certain of the bursts transmitted by the latter;
- 5 c) means (300, 34) for comparing the linearization training sequence transmitted with the linearization training sequence generated so as to teach said linearization device,
- 10 characterized in that said linearization training sequence is included in a sequence of symbols that is further designed to allow the adjusting of parameters of the transmission chain between said first equipment and a second equipment (5') of the radiocommunication system with which said first item of equipment
- 15 communicates.

9. The device as claimed in claim 8, wherein the sequence of symbols that is designed to allow the adjusting of parameters is a sequence of symbols that

20 is designed to allow the dynamic control of the gain of a variable-gain amplifier of a radiofrequency receiver of a second equipment of the radiocommunication system with which the first equipment communicates.

25 10. The device as claimed in claim 8 or claim 9, wherein the linearization training sequence occupies only a part of the burst in which it is transmitted.

30 11. The device as claimed in claim 10, wherein the linearization training sequence occupies around 5% of the duration of the burst in which it is transmitted.

35 12. The device as claimed in any one of claims 8 to 11, wherein said means for transmitting are adapted for transmitting the linearization training sequence at the start of the frame.

13. The device as claimed in any one of claims 8 to 12, wherein said means for transmitting are adapted for

transmitting, moreover, the linearization training sequence during a change of logical channel, a change of frequency and/or a change of power rating of the mobile terminal.

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14. The device as claimed in any one of claims 8 to 13, wherein the sequence of symbols that is designed to allow the adjusting of parameters comprises more than N symbols, and wherein said N symbols of the  
10 linearization training sequence are the symbols of the sequence of symbols that is designed to allow the adjusting of parameters which are sent first.

15. A mobile terminal (5) of a radiocommunication  
15 system, comprising a radiofrequency transmitter (30) having a radiofrequency amplifier and a device (33) for linearizing the radiofrequency amplifier, characterized in that it further comprises a device for training the linearization device as claimed in any one of claims 8  
20 to 14.

16. A base station (5') of a radiocommunication system comprising a radiofrequency transmitter (30') having a radiofrequency amplifier and a device for linearizing  
25 the radiofrequency amplifier, characterized in that it further comprises a device for training the linearization device as claimed in any one of claims 8 to 14.